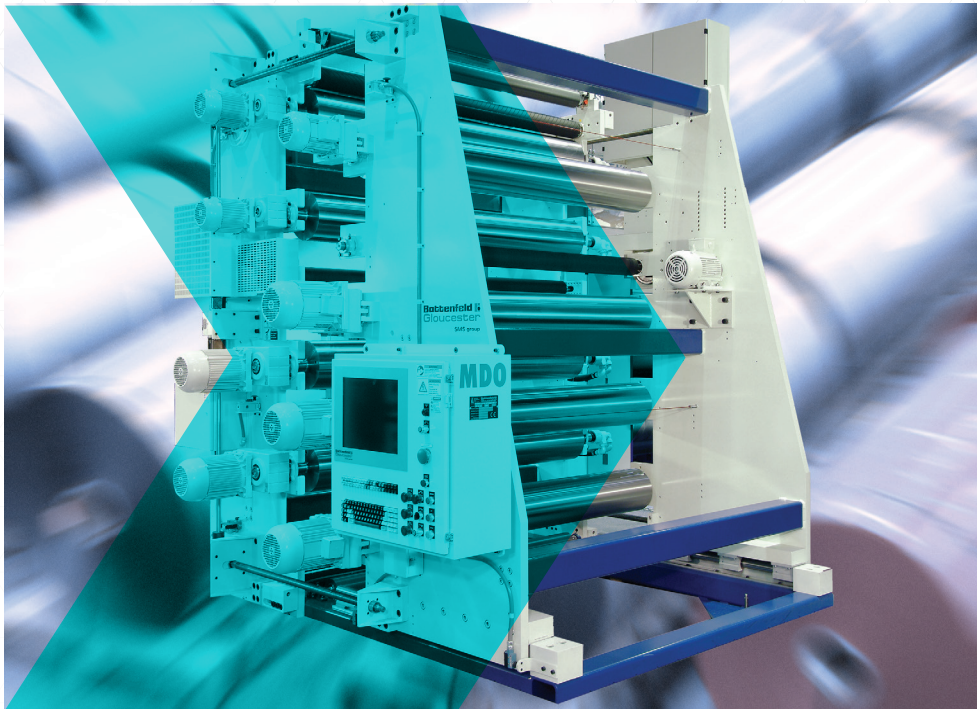




DAVIS › STANDARD®

Where your ideas take shape.



In-Line MDO

Overview

The flexible packaging industry continues to demand new technologies that increase production efficiency and create more sophisticated films without incurring high capital investments. For the stretch wrap market Gloucester Engineering's solution is our Machine Direction Orienter, or MDO.

Machine direction orientation provides physical property enhancements to PE films allowing downgauging and ability to create specialty films. In the case of stretch wrap films, oriented or prestretched film gives greater load folding force plus less film next-down during use vs. standard stretch wrap.

Film enters the MDO unit, is preheated, run through two draw rolls for orientation, then annealed and cooled for winding. The process increases the film two to four times the original length resulting in a stronger, clearer, thinner, and more cost effective film. The MDO can be run in-line for blown film production or off-line as a separate process.

Features

- The ability to orient blown film tubing
- Modular design supported on adjustable leveling pads
- Multiple temperature zones allow for a large variety of process variations
- Variable draw ratios
- Adjustable roll pitch
- Roll surfaces designed for each of their special purposes with release coatings provided on the preheat, anneal, and cool rolls
- Movable frame is designed for the easy access, removal, maintenance, and re-insertion of each roll
- The MDO unit is fully enclosed for safe operation
- Safety interlocks, safety pull cords, and e-stops are strategically arranged for maximum assurance
- Control panels designed for convenience, flexibility, and safety
- Local control panel can be mounted on either side or on the front of the system, per the customer's advance request

In-Line MDO

Roll	Roll Diameter	Material	Surface
Input idler	4.5" (114 mm)	aluminum	durosoft coated
Input nip	4.5" (114 mm)	aluminum/rubber	chevron groove
Preheat 1, 2, 3	10.5" (267 mm)	steel/sputtered/dual wall	release coating
Draw 1, 2	4.5" (114 mm)	steel/rubber	circumferential ridges
Anneal 1, 2	10.5" (267 mm)	steel/sputtered/dual wall	release coating
Cool 1, 2, 3	10.5" (267 mm)	steel/sputtered/dual wall	release coating
Output idler	4.5" (114 mm)	aluminum	

Specifications

Frame

Precision ground steel – split design on a vertical plane

Maximum Input Speed

300 feet per minute (91 meters per minute)

Four Zones

- Preheat zone: Prepares film for stretching
- Draw zone: Stretches film
- Anneal zone: Adds strength to and stabilizes film
- Cooling zone: Prepares film for material handling

Maximum Output Speed

- 900 feet per minute (274 meters per minute)

Drive System

- AC flux vector drives

Web Width

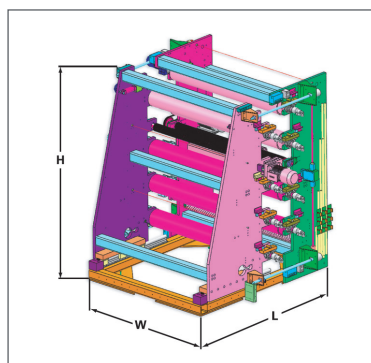
- 2000 mm & 2800 mm;
- Other widths available upon request

Control Panels

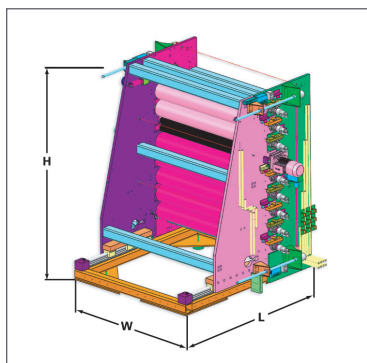
- Local and optional remote panels with LCD display, keyboard and controls

Web Thickness

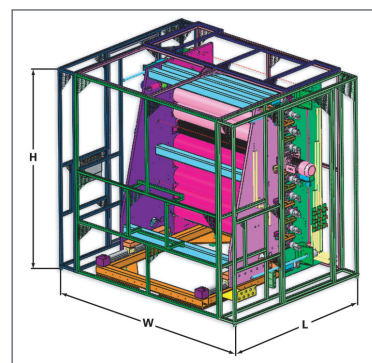
- 0.001 – 0.003" (25 – 75 microns)



Frame OPENED



Frame CLOSED



Safety Enclosure without mesh panels

	LENGTH	WIDTH	HEIGHT
MDO 2000 mm	106" (2692.4 mm)	133" (3378.2 mm)	122" (3098 mm)
MDO 2800 mm	106" (2692.4 mm)	163" (4140.2 mm)	122" (3098 mm)
ENCLOSURE 2000 mm	113.50" (2882.89 mm)	146" (3708 mm)	105.25" (2673.35 mm)
ENCLOSURE 2800 mm	113.50" (2882.89 mm)	176" (4470.4 mm)	105.25" (2673 mm)